

CLAIMS

- 5 1. Process for the operation of an active electro-optical filtering device with an active optical filter element (1), **characterized in that** the optical filter element (1) is driven with anti-polar drive pulses, whereby the optical filter element (1) is short-circuited between two successive drive pulses.
2. Process in accordance with claim 1, **characterized in that** the short-circuit times (t_{s1} , t_{s2}) are shorter, preferably by factors in the order of magnitude of 10^3 to 10^7 , than the time durations (t_+ , t_-) of the drive pulses.
- 10 3. Process in accordance with claim 1 or 2, **characterized in that** the framework frequency (f) of the drive pulses amounts to between 0.01 and 1 Hz.
- 15 4. Process for the operation of an active electro-optical filtering device with an active optical filter element (1), in preference in accordance with one of the claims 1-3, **characterized in that** an operating voltage (U_{LC}) is applied to the optical filter element at which operating voltage (U_{LC}) the scattered light term (ϕ_{1R}) of the optical filter element (1) is smaller than or equal to the transmission term of the optical filter element (1).
5. Process in accordance with claim 4, **characterized in that** the operating voltage (U_{LC}) lies several times above the Fréedericksz-threshold of the optical filter element (1).

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- 5 6. Active electro-optical filtering device, which can be operated with the process in accordance with one of the claims 1-5, containing at least one active optical filter element (1) with a liquid crystal, electronic means (2) for driving the at least one active filter element (1), a light sensor (4) operating in conjunction with the electronic means (2) and electric power supply means (5), in particular a solar cell, for the electronic means (2) and the at least one optical filter element (1), **characterized in that** the liquid crystal is implemented in accordance with one of the following technologies: TN-technology, STN-technology, dichroic technology, ferro-electric technology or π -Mode-LCD-technology.
- 10 7. Drive circuit (2) for an active electro-optical filtering device in accordance with claim 6, **characterized by** a switch (S_1), with which the active optical filter element (1) can be short-circuited.

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